REMARKS

The specification has been amended to insert the generic name for MEDI-507, *i.e.*, siplizumab. As evidenced by Singri *et al.*, "Biologic Therapy for Psoriasis: The New Therapeutic Frontier," Arch Dermatol. 138:657-663 (2002) ("Singri"; cited in the Supplemental Information Disclosure Statement submitted herewith as reference C240), MEDI-507 was known in the art as of the effective filing date of the present application as siplizumab. Accordingly, no new matter has been introduced into the specification.

Claims 45-82 were pending in this application. In order to expedite prosecution of the application and without conceding to the propriety of any rejections, Applicants have canceled claims 45-82 without prejudice. Applicants fully reserve the right to prosecute the subject matter of canceled claims 45-82 in the present application or one or more related applications. New claims 83-114 have been added.

The new claims are fully supported by the specification of the application, *see*, *e.g.*, page 1, line 34 to page 2, line 11; page 5, lines 31-33; page 8, lines 8-10; page 9, line 3; page 9, line 32 to page 10, line 4; page 10, lines 18-23; page 14, lines 14-18; page 14, line 33 to page 15, line 12; page 18, lines 18-35; page 20, lines 14-20; page 24, line 26 to page 25, line 10; page 39, lines 26-31; page 43, lines 18-21; page 47, lines 5-7; page 54, lines 11-15; page 54, line 16 to page 55, line 14; page 55, lines 25-26; page 62, lines 25-27 and 31; page 64, lines 29-31 and 32; page 65, lines 19-23; page 66, lines 13-20 and 28-32; page 67, lines 3-13; page 68, lines 6-22; page 69, lines 14-26; page 69, line 35 to page 70, line 11; page 70, lines 12-23; page 72, lines 7-9; page 87, line 20; and page 89, lines 1-8 of the specification, and do not constitute new matter. Upon entry of this Amendment, claims 83-114 will be pending.

Applicants respectfully request that the amendments and remarks made herein be considered and entered into the record for the application.

I. STATEMENT OF THE SUBSTANCE OF THE INTERVIEW

Applicants thank Examiner Zachary Skelding for the courtesy he extended during the telephonic interview on May 21, 2008 with Applicants' representatives Dr. Jennifer Chheda and Dr. Eric Lee regarding the rejections in the final Office Action dated February 22, 2008. In particular, Applicants' representatives discussed with Examiner Skelding possible claim amendments and arguments to overcome the rejections under 35 U.S.C. § 103(a).

II. THE REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH, SHOULD BE WITHDRAWN

Claims 45-67, 70-79, and 82 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner alleges that the terms "MEDI-507" and "LO-CD2a/BTI-322" are indefinite. Claims 45-67, 70-79, and 82 have been canceled without prejudice and new claims 83-114 have been added. Applicants respectfully submit that this rejection should not be applied to new claims 83-114 for the reasons detailed below.

New claims 82-114 do not recite the term "MEDI-507." Instead, claims 83-114 recite the term "siplizumab," the generic name for MEDI-507. As of the effective filing date of the present application, one skilled in the art would have known that siplizumab is the generic name for MEDI-507. *See, e.g.*, Singri, which states that "[s]iplizumab (Medi-507; Medimmune, Gaithersburg, Md) is a humanized monoclonal antibody directed against CD2 expressed in high concentrations on activated T cells." *Id.* at 661, right column, lines 4-7.

The specification of the present application teaches that MEDI-507 is disclosed in International Publication No. WO 99/03502 ("Bazin") and U.S. application Serial No. 09/462,140 (now issued U.S. Patent No. 6,849,258) and incorporates these references into the specification. *See* page 64, lines 29-31 of the specification of the present application. Example 11 of Bazin describes the construction and analysis of MEDI-507. Figures 31 and 42 of Bazin provide amino acid sequences for the light chain variable region and heavy chain variable region of MEDI-507. Thus, Applicants submit that one of skill in the art would be able to ascertain the antibody encompassed by the term "siplizumab."

With respect to the term "LO-CD2a/BTI-322", as suggested by the Examiner, new claim 114 recites the ATCC Accession Number for the antibody (*i.e.*, ATCC Accession No. HB 11423) (*see* Office Action at page 3). Thus, Applicants submit that one of skill in the art would have been able to ascertain the antibody encompassed by the term "LO-CD2a." Accordingly, the rejection under 35 U.S.C. § 112, second paragraph, should not be applied to the new claims.

In view of the foregoing, Applicants respectfully assert that the rejection under 35 U.S.C. § 112, second paragraph, cannot stand and should be withdrawn.

III. THE REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH, SHOULD BE WITHDRAWN

Claims 45-67, 70-79, and 82 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly lacking enablement. For the reasons below, the rejection should be withdrawn.

Applicants acknowledge with appreciation the Examiner's finding that the specification of the present application is enabling for the use of LO-CD2a. *See* Office Action at page 5.

The Examiner alleges that the specification of the present application does not enable the use of MEDI-507. Although the Examiner acknowledges that Bazin discloses the heavy and light chain variable regions of MEDI-507, the Examiner contends that Bazin does not disclose the sequence of the particular heavy and light chain constant regions of MEDI-507. Applicants respectfully disagree.

Bazin discloses the vectors that express the humanized heavy chain constant region and light chain constant region of MEDI-507 and methods for producing MEDI-507 (*see*, page 81, lines 26-35, and Figure 43, and Maeda *et al.*, "Construction of Reshaped Human Antibodies with HIV-neutralizing Activity," Hum. Antibod. Hybridomas, 2:124-134 (1991), which is cited in Bazin and in the Supplemental Information Disclosure Statement submitted herewith). Applicants submit that the sequences for those constant regions were known to one of skill in the art as of the effective filing date of the present application. Applicants direct the Examiner's attention to the following references for a description of the nucleotide and/or amino acid sequences of the humanized light chain and heavy chain constant regions of MEDI-507: (1) Hieter *et al.*, "Cloned Human and Mouse Kappa Immunoglobulin Constant and J Region Genes Conserve Homology in Functional Segments," Cell 22:197-207 (1980) ("Hieter"; cited in the Supplemental Information Disclosure Statement submitted herewith as reference C238); (2) Edelman *et al.*, "The Covalent Structure of an Entire γG Immunoglobulin Molecule," Proc. Natl. Acad. Sci. USA 63:78-85 (1969) ("Edelman"; cited in the Supplemental Information Disclosure Statement submitted herewith as reference C237); and (3) Takahashi *et al.*, "Structure of Human Immunoglobulin Gamma Genes: Implications for Evolution of a Gene Family," Cell 29:671-679 (1982) ("Takahashi"; cited in the Supplemental Information Disclosure Statement submitted herewith as reference C241). In particular, Applicants direct the Examiner's attention to Figures 3, 4, 7, and 9 of Takahashi and Figure 5 of Hieter, for the nucleotide sequences of the humanized heavy chain and light chain constant regions of MEDI-507, respectively. Applicants also direct the Examiner's attention to Figure 3 of Edelman for the amino acid sequence of the humanized heavy chain constant region of MEDI-507. Accordingly, Applicants submit that in view of the description of MEDI-507 in Bazin and the knowledge in the art of the sequences of the

humanized heavy chain and light chain constant regions of MEDI-507, one of skill in the art would have been able to obtain or make and use MEDI-507 as claimed.

The Examiner alleges that the specification does not enable a method of treating a T-cell malignancy comprising administering an antibody that immunospecifically binds to human CD2. Applicants respectfully disagree. In view of the teaching in the specification of the present application and the state of the art, one of skill in the art as of the effective filing date of the present application would have construed the term "malignancy" to refer to a cancerous growth. *See* page 1, lines 22-30 of the specification of the present application. Applicants respectfully submit that the specification does enable one of skill in the art to treat cancers involving cell types that express CD2.

Notwithstanding the foregoing, in order to expedite prosecution of the present application and without conceding to the propriety of the rejection, Applicants have canceled claims 45-67, 70-79, and 82, without prejudice and added new claims 83-114. Applicants submit that the rejection under 35 U.S.C. § 112, first paragraph, for lack of enablement should not be applied to the new claims 83-114.

The new claims are directed to a method for treating adult T-cell leukemia ("ATL"), a cancer involving T-cells expressing CD2. *See* page 2, line 34 to page 3, line 11; Yamada, "Phenotypic and Functional Analysis of Leukemic Cells from 16 Patients with Adult T-Cell Leukemia/Lymphoma," Blood 61:192-199 (1983), cited in the Information Disclosure Statement submitted September 8, 2004, as reference C220; and Shirono *et al.*, "Profiles of Expression of Activated Cell Antigens on Peripheral Blood and Lymph Node Cells from Different Clinical Stages of Adult T-cell Leukemia," Blood 73:1664-1671 (1989) ("Shirono"). The Examiner has acknowledged that the specification enables claims directed to a method of treating tumors of T-cell origin comprising administering an antibody that immunospecifically binds to human CD2. *See* Office Action at page 3. Thus, new claims 83-114 directed to treating ATL comprising administering an antibody that immunospecifically binds to human CD2 (including MEDI-507) are enabled.

In view of the foregoing, Applicants respectfully assert that the rejection under 35 U.S.C. § 112, first paragraph, cannot stand and should be withdrawn.

IV. THE REJECTION UNDER 35 U.S.C. § 103(a) SHOULD BE WITHDRAWN

A. THE REJECTION OVER DANG IN VIEW OF SHIRONO, BRANCO, AND BAZIN SHOULD BE WITHDRAWN

Claims 45-54, 57-64, 66, 67, 70-79, and 82 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over US Publication No. 2003/0031665 to Dang *et al.* ("Dang")

in view of Shirono, Branco *et al.*, "Selective Deletion of Antigen-Specific, Activated T Cells by a Humanized MAb to CD2 (MEDI-507) is Mediated by NK Cells," Transplantation 68:1588-1596 (1999) ("Branco"), and Bazin. The Examiner alleges that it would have been obvious to one of ordinary skill in the art to substitute the anti-CD26 antibody taught in Dang for the treatment for cancer (including ATL) with an antibody that immunospecifically binds to a human CD2, given the teaching in Shirono of the expression of CD2 by peripheral blood T-cells from ATL patients. The Examiner opines that one of ordinary skill in the art would have been motivated to use MED-507, or any antibody that competes with MEDI-507 for binding to human CD2 to treat ATL given the teaching in Branco that MEDI-507 preferentially depletes activated T-cells and the teaching in Bazin of methods for inhibiting T-cell proliferation using MEDI-507. Applicants respectfully disagree.

None of the cited references, alone or in combination, teach or suggest treating a T-cell malignancy using an antibody that immunospecifically binds to human CD2, much less treating ATL using such an antibody. However, in order to expedite prosecution of the present application and without conceding to the propriety of any rejection, claims 45-82 have been canceled, without prejudice and new claims 83-114 have been added. For the reasons below, the rejection under 35 U.S.C. § 103(a) should not be applied to new claims 83-114.

A finding of obviousness requires that "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §103(a). In its recent decision addressing the issue of obviousness, *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007), the Supreme Court stated that the following factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) still control an obviousness inquiry: (1) the scope and content of the prior art; (2) the differences between the prior art and the claimed invention; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *KSR*, at 1734, 82 USPQ2d at 1388 (quoting *Graham*, at 17-18, 14 USPQ at 467).

The *KSR* Court rejected a rigid application of the "teaching, suggestion, or motivation" test previously applied by the Court of Appeals for the Federal Circuit. *KSR*, at 1739, 82 USPQ2d at 1395. However, the Supreme Court affirmed that it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does . . . because inventions in

most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *Id.*, at 1741, 82 USPQ2d at 1396. Thus, consistent with the principles enunciated in *KSR*, a *prima facie* case of obviousness can only be established by showing a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference *and* to carry out the modification with a reasonable expectation of success, viewed in light of the prior art.

Thus, the principles set forth in *Graham*—which are still good law post-*KSR*—require that *both* the suggestion and the expectation of success must be found in the prior art, and not derived from knowledge gained from the applicant's disclosure.

After the *KSR* decision, the Board of Patent Appeals and Interferences has continued to shape the contours of the obviousness inquiry. The Supreme Court in *KSR* stated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *Id.*, at 1741, 82 USPQ2d at 1389. Following *KSR*, the Board stated that "[i]t is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *Ex Parte El-Naggar*, WL 2814131 at *3 (BPAI 2007) (citing *In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986) (quoting *In re Wesslau*, 353 F.2d 238, 241 (C.C.P.A. 1965))). Moreover, the Board has also stated that "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Ex Parte Altenbuchner*, WL 1766992 at *6 (BPAI 2007) (quoting *In re Kahn*, 441 F3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)).

Dang relates to anti-CD26 antibodies and the use of such antibodies to treat cancers and immune diseases. Dang does not teach or suggest an antibody that immunospecifically binds to human CD2, much less a method of treating ATL comprising administering to a human in need of such a treatment an antibody that immunospecifically binds to human CD2.

Shirono would not have provided one of ordinary skill in the art as of the effective date of the present application with a motivation or a reasonable expectation of treating ATL by administering an antibody that immunospecifically binds to human CD2 in place of the anti-CD26 antibody taught in Dang. Shirono teaches that numerous antigens are overexpressed on T-cells from patients with ATL, including CD28, T9, Ki-67 and CD25 (IL-

2 receptor alpha ("IL-2Rα")). Nothing in Shirono would have provided one of ordinary skill in the art as of the effective date of the present application with a motivation to select human CD2 as the antigen to target to treat ATL as opposed to one of the other antigens that Shirono reports is overexpressed by T-cells from ATL patients. Merely because an antigen is overexpressed on T-cells from ATL patients would not have provided one of ordinary skill in the art with a reasonable expectation that an antibody directed to that antigen would be successful in treating ATL.[1]

The example section of the specification of the present application demonstrates that the administration of an antibody immunospecific for IL-2Rα, another antigen overexpressed by T-cells from ATL patients, is not as effective as the administration of an antibody immunospecific for human CD2 for the treatment ATL. Mice injected with MET-1 leukemic cells exhibited decreased tumor burden and increased survival when treated with MEDI-507 as compared to when treated with an anti-IL-2Rα antibody. *See*, page 121, line 24 to page 122, line 31; and Figures 3 and 4. In particular, 60 days post-treatment, mice treated with anti-IL-2Rα antibody exhibited nearly twice as much tumor burden compared to mice treated with MEDI-507, as measured by serum levels of serum β_2 microglobulin, a surrogate tumor marker. *See* Figure 3. Additionally, all of the mice either receiving no treatment or treated with anti-IL-2Rα antibody died after 125 days, whereas over half of the mice treated with MEDI-507 survived over that same span of time. *See* Figure 4. Thus, merely because an antigen is overexpressed on T-cells of ATL patients does not provide one ordinary skill in the art with a reasonable expectation that an antibody against that antigen would be successful to treat adult T-cell leukemia.

The deficiencies in Dang and Shirono are not cured by Branco and/or Bazin. Branco teaches that the deletion of T-cells using MEDI-507 is mediated by NK cells and that MEDI-507 may be used to treat graft versus host disease. Branco does not teach or suggest treating ATL using an antibody that immunospecifically binds to human CD2.

Bazin generically describes using LO-CD2a and MEDI-507 to prevent or inhibit T-cell activation. In particular, Bazin describes the use of LO-CD2a and MEDI-507 for preventing or inhibiting graft rejection, graft versus host disease, and autoimmune disease. Bazin does not teach or suggest treating ATL using an antibody that immunospecifically binds to human CD2.

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[1] The Examiner acknowledges that treatment with an antibody directed to any antigen is not necessarily effective in deleting a cell population overexpressing that antigen. The Examiner states that "the use of anti-CD3 and anti-CD4 antibodies to treat T cell malignancies such as multiple sclerosis has not been successful." Office Action at page 4.

In view of the foregoing, the rejection under 35 U.S.C. § 103(a) cannot stand and should be withdrawn.

B. THE REJECTION OVER DANG IN VIEW OF SHIRONO, BRANCO, AND BAZIN, AND FURTHER IN VIEW OF DORONINA SHOULD BE WITHDRAWN

Claims 45-54, 57-67, 70-79, and 82 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dang in view of Shirono, Branco, and Bazin, and further in view of U.S. Publication No. 2003/0083263 to Doronina ("Doronina"). The Examiner alleges that it would have been obvious to one of ordinary skill in the art to prepare an anti-CD2-auristatin PHE immunotoxin that would be able to kill CD2-expressing T-cells in view of the teaching in Dang, Shirono, Branco, Bazin and Doronina.

As discussed above, claims 45-54, 57-67, 70-79 and 82 have been canceled without prejudice and new claims 83-114 have been added. This rejection should not be applied to the new claims.

The deficiencies of Dang, Shirono, Branco, and Bazin, as discussed above, are not cured by Doronina. Doronina relates to biologically active organic compounds such as pentapeptides and methods for their use as cytotoxic agents. Doronina does not teach or suggest methods of treating a T-cell malignancy using an antibody that immunospecifically binds to human CD2, much less treating ATL using such an antibody. Thus, the combination of Dang, Shirono, Branco, Bazin and Doronina does not suggest or provide one of ordinary skill in the art with a motivation or a reasonable expectation of successfully treating ATL by administering an antibody that immunospecifically binds to human CD2.

In view of the foregoing, the rejection under 35 U.S.C. § 103(a) cannot stand and should be withdrawn.

C. THE REJECTION OVER DANG IN VIEW OF SHIRONO, BRANCO, AND BAZIN, AND FURTHER IN VIEW OF TAGUCHI SHOULD BE WITHDRAWN

Claims 45-64, 66, 67, 70-79, and 82 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dang in view of Shirono, Branco, and Bazin, and further in view of Taguchi *et al.*, "An Intensive Chemotherapy of Adult T-Cell Leukemia/Lymphoma: CHOP Followed by Etoposide, Vindesine, Ranimustine, and Mitoxantrone with Granulocyte Colony-Stimulating Factor Support," J Acquir. Immune Defic Syndr Hum Retroviral 12:182-186 (1996) ("Taguchi"). The Examiner alleges that Taguchi teaches an attempt to use aggressive combination chemotherapy, which includes cyclophosphamide, to treat adult T-cell leukemia. The Examiner opines that it would have been obvious to employ a method of

treatment consisting of two compositions, each of which is taught by the prior art to be useful for the same purpose.

As discussed above, claims 45-64, 66, 67, 70-79 and 82 have been canceled, without prejudice and new claims 83-114 have been added. For the reasons below, this rejection under 35 U.S.C. § 103(a) should not be applied to new claims 83-112.

The deficiencies of Dang, Shirono, Branco, and Bazin are not cured by the teachings of Taguchi. Taguchi relates to a combination chemotherapeutic regimen supported by granulocyte colony-stimulating factor (G-CSF) for patients with adult T-cell leukemia/lymphoma. Taguchi does not teach or suggest methods of treating ATL using an antibody that immunospecifically binds to human CD2. Thus, the combination of Dang, Shirono, Branco, Bazin and Taguchi does not suggest or provide one of ordinary skill in the art with a motivation or a reasonable expectation of successfully treating ATL by administering an antibody that immunospecifically binds to human CD2.

In view of the foregoing, the rejection under 35 U.S.C. § 103(a) cannot stand and should be withdrawn

D. THE REJECTION OVER PR NEWSWIRE, BORG, SPITZER, AND BAZIN SHOULD BE WITHDRAWN

Claims 45-60, 66, 67, 70-79, and 82 are rejected under 35 U.S.C. § 103(a) as unpatentable over PR Newswire, "BioTransplant and Massachusetts General Hospital Announce Clinical Success in Transplant Protocol for Patients without Matched Donors," Dec. 5, 2000 ("PR Newswire"), Borg *et al.*, "Successful Treatment of HTLV-1-Associated Acute Adult T-Cell Leukaemia Lymphoma by Allogeneic Bone Marrow Transplant," Br J Haematol. 94:713-715 (1996) ("Borg"), Spitzer *et al.*, "Haploidentical Donor Bone Marrow Transplantation (BMT) for Advanced Hematologic Malignancy (HM) Following Non-Myeloablative Preparative Therapy: Role of *In Vivo* T-Cell Depletion with Anti-Thymocyte Globulin or Anti-CD2 Monoclonal Therapy (MEDI-507)," Blood 96:841a, Abstract #3633 (2000) ("Spitzer"), and Bazin.

The Examiner alleges that it would have been obvious to treat a T-cell malignancy of the blood using MEDI-507 given: (1) the teaching in PR Newswire of the use of a pre-transplant preparative regimen consisting of the administration of MEDI-507 and irradiation of the thymus followed by bone marrow transplant or in combination with donor lymphocyte infusions; (2) the teaching in Borg of the treatment of ATL in a patient using aggressive combination chemotherapy followed by allogenic bone marrow transplant; (3) the teaching in Spitzer of a method for treating hematopoietic malignancies comprising administering a non-myeloablative conditioning regimen comprising cyclophosphamide and MEDI-507, followed

by bone marrow transplant; and (4) the teaching in Bazin of a method for inhibiting proliferation of T-cells comprising administering a therapeutically effective amount of LO-CD2a/BTI-322 or MEDI-507. Applicants respectfully disagree.

None of the cited references, alone or in combination, teach or suggest treating a T-cell malignancy using an anti-CD2 antibody. However, in order to expedite prosecution of the present application and without conceding to the propriety of the rejection, claims 45-60, 66, 67, 70-79, and 82 have been canceled, without prejudice and new claims 83-114 have been added. For the reasons below, the rejection under 35 U.S.C. § 103(a) should not be applied to new claims 83-114.

PR Newswire reports the results of a pre-transplant preparative regimen designed to decrease transplant rejection with minimal destructive effects on the transplant recipient's bone marrow. The purpose of the method described in PR Newswire is different than the purpose of the method of the presently claimed invention. The purpose of the method described in PR Newswire is to modify the immune system of a transplant recipient before the transplant to reduce the development of graft versus host disease. Among those patients who may benefit from the method described in PR Newswire are those patients with a blood cancer. However, the blood cancer is not being treated using the method described in PR Newswire. Rather, the method described in PR Newswire primes the patient for the actual therapy, *i.e.*, a bone marrow transplant or donor lymphocyte infusions. The endpoint for preventing/treating graft versus host disease which is described in PR Newswire is successful transplantation of tissue from donor to recipient.

In contrast, the presently claimed invention is directed to a method for treating ATL by administering to a human in need thereof an antibody that immunospecifically binds to human CD2 in which the antibody itself treats ATL. In accordance with the presently claimed invention, the patient receiving an antibody that immunospecifically binds to human CD2 has been diagnosed with ATL and the antibody treats the disease itself.

In particular, presently pending claim 83 is directed to a method for treating ATL comprising administering to a human in need thereof an antibody that immunospecifically binds to human CD2, and presently pending claim 84 recites that the antibody is siplizumab or an antigen-binding fragment thereof. The Federal Circuit has stated that claims directed to a method of treatment are to be interpreted to require that the method is to be practiced with the intent to achieve the objective stated in the preamble of the claim. *Jansen v. Rexall Sundown, Inc.*, 342 F.3d 1329, 1332-33 (Fed. Cir. 2003) (discussing *Rapoport v. Dement*, 254 F.3d 1053, 1059-61 (Fed. Cir. 2001)). Thus, in accordance with *Jansen* and *Rapoport*, claims

83 and 84 require that the method of treating ATL be construed as treating the underlying disease, which is distinct from the method described in PR Newswire.

Presently pending claims 85 and 86 are directed to a method of treating adult T-cell leukemia consisting essentially of administering an effective amount of an antibody that immunospecifically binds to human CD2. Presently pending claims 87 and 88 are directed to a method of treating adult T-cell leukemia consisting essentially of administering an effective amount of an antibody that immunospecifically binds to human CD2 and a therapy, wherein the therapy is chemotherapy, immunotherapy, psoralen and ultraviolet A (PUVA) therapy, radiation therapy, a retinoid, an anti-retroviral agent, or any combination thereof. Thus, claims 85-88 (and claims dependent therefrom) exclude any additional therapy that materially affects the treatment of ATL. In other words, only those therapies recited in claims 85-88 (and claims dependent therefrom) are the active therapies for the treatment of ATL and any other therapy not recited in those claims that would be effective in the treatment of ATL are excluded from the claims. For example, bone marrow transplantation and donor lymphocyte infusions would be excluded from claims 85-88. Accordingly, the method described in PR Newswire which involves bone marrow transplantation and donor lymphocyte infusions is excluded from claims 85-88 (and claims dependent therefrom).

The deficiencies of PR Newswire are not cured by Spitzer, Borg or Bazin. Spitzer describes the use of MEDI-507 as part of a non-myeloablative bone marrow transplantation regimen to provide protection from graft versus host disease in patients with advanced hematologic malignancy. Like in PR Newswire, the purpose or intent of the method described in Spitzer is to prevent graft versus host disease following bone marrow transplantation. The purpose or intent is *not* to treat the disease ATL itself using an antibody that immunospecifically binds to human CD2. Moreover, bone marrow transplantation is excluded from the methods recited in claims 85-88 (and claims dependent therefrom).

Borg merely describes the use of bone marrow transplantation for treatment of adult T-cell leukemia. Bazin teaches the use of LO-CD2a and MEDI-507 for preventing or inhibiting graft rejection, graft versus host disease, and autoimmune disease. Neither Borg nor Bazin teach or suggest treating ATL utilizing an antibody that immunospecifically binds to human CD2.

Accordingly, PR Newswire, alone or in combination with Borg, Spitzer, and Bazin, does not teach or suggest the presently claimed methods. Moreover, the cited references would not have provided one of ordinary skill in the art as of the effective date of the present application with a reasonable expectation of success.

In view of the foregoing, the rejection under 35 U.S.C. § 103(a) cannot stand and should be withdrawn.

CONCLUSION

Applicants believe that the present claims meet all of the requirements for patentability. Consideration and entry of the foregoing amendments and remarks into the file of the present application is respectfully requested.

If a telephone interview would be of assistance in advancing prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

Respectfully submitted,

Date: July 22, 2008

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